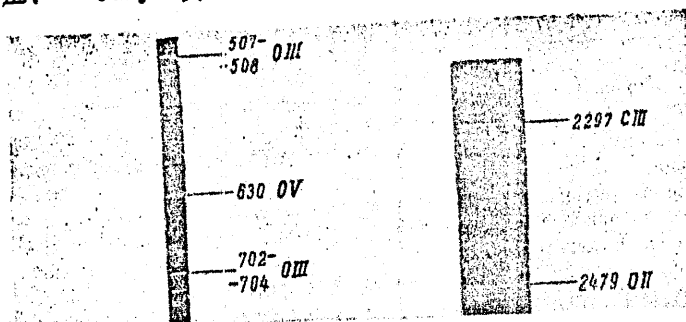


87458

Spectral Examinations With "Al'fa" Research S/057/60/030/012/005/011
Installation. I. Study of the Character of B019/B056
the Spectrum and of the Ion Temperature

ASSOCIATION: Fiziko-tekhnicheskiy institut AN SSSR (Institute of
Physics and Technology of the AS USSR). Nauchno-
issledovatel'skiy institut elektrofizicheskoy apparatury
(Scientific Research Institute of Electrophysical
Apparatus)

SUBMITTED: July 15, 1960



Card 3/5

87458

Spectral Examinations With "Al'fa" Research S/057/60/030/012/005/011
Installation. I. Study of the Character of B019/B056
the Spectrum and of the Ion Temperature

distribution and a pure Doppler broadening of the spectral lines exists. From the data concerning the temperature of the impurity ions obtained herewith it follows that, in dependence on the selection of the lines, from whose broadening the ion temperature is determined with (1), the calculated temperature varies about the range of $0.5 \cdot 10^6 - 15 \cdot 10^6$ °K. The calculated temperature value is the higher, the stronger the charge of the ion according to whose line broadening the temperature has been determined. This indicates an independent motion of the ions of different charges and a non-uniqueness of determining the plasma temperature from the Doppler broadening of the impurity atoms. The authors thank B. P. Konstantinov for discussions and N. I. Kalitayevskiy, A. N. Razumovskiy, and M. P. Chayke for taking part in the work. There are 6 figures, 4 tables, and 7 references: 3 Soviet and 4 US.

Card 2/5

87458

S/057/60/030/012/005/011
B019/B056

24,2120 (1482, 1502, 1395)

AUTHORS: Zaydel', A. N., Malyshev, G. M., Shreyder, Ye. Ya.,
~~Berezin, A. B.~~, Belyayeva, V. A., Gladushchak, V. I.,
 Skidan, V. V., Sokolova, L. V.

TITLE: Spectral Examinations With "Al'fa" Research Installation.
 I. Study of the Character of the Spectrum and of the Ion
 Temperature

PERIODICAL: Zhurnal tekhnicheskoy fiziki, 1960, Vol. 30, No. 12,
 pp. 1422 - 1432

TEXT: The spectrum of the discharge was investigated within the range
 of 350-5000 Å. The spectrum of 350-2000 Å was recorded by a vacuum
 spectrograph (600 lines/mm), the optical axis of the instrument was laid
 in a radial direction. From 2000 Å to 5000 Å a quartz spectrograph was
 used. Fig.1 shows several spectra recorded by the apparatus. For deter-
 mining the ion temperature, the authors used the relation

$$T = 1.95 \cdot 10^{12} \mu (\Delta\lambda/\lambda)^2 \quad (1),$$
 on the supposition that a Maxwell velocity

Card 1/5

Berezin, A.B.

- 24(8) PHASE I BOOK REPRODUCTION 509/2117
 Sovetskoye po eksperimental'noy tekhnike i metodam vysokotemperaturnykh issledovaniy, 1956
- Experimental'naia tekhnika i metody issledovaniy pri vysokikh temperaturakh. This book is intended for metallurgists and metallurgical engineers. It contains: 1) thermodynamic activity and kinetics of high-temperature processes; 2) constitution diagram studies; 3) physical properties of liquid metals and alloys; 4) new analytical methods and procedures for the analysis of pure metals; 5) properties, and 6) general questions for more specific coverage, see Table of Contents.
- Reep. Ed.: A.M. Samarin, Corresponding Member, USSR Academy of Sciences, Ed. of Publishing House: A.L. Benyavskii.
- REMARK: This book is intended for metallurgists and metallurgical engineers.
- COVERAGE: This collection of scientific papers is divided into six parts: 1) thermodynamic activity and kinetics of high-temperature processes; 2) constitution diagram studies; 3) physical properties of liquid metals and alloys; 4) new analytical methods and procedures for the analysis of pure metals; 5) properties, and 6) general questions for more specific coverage, see Table of Contents.
- Stroyev, A.S., Ye.S. Ovsheyn, and A.M. Ivanov. Arc Melting of Molybdenum in Vacuum 470
- The high degree of purity necessary for satisfactory deformation of molybdenum in vacuum is achieved by the use of arc melting in high vacuum of the order of 10^{-3} mm Hg. The method is described in detail. Ingots weighing up to 15 kg, made under these conditions, are free of defects, and the central zone, irrespective of the rate of cooling after melting. Because of their relatively fine grain structure and the distinctness of their grain boundaries, such ingots can be deformed by any method including hammer forging and rolling. The method of arc melting conditions are described in detail. The deformed molybdenum retains satisfactory ductility characteristics at room temperature.
- Reep. Ed.: A.A. Monerchuk. Melting by the Induction-Heating Method 478
- Berezin, A.B., and Yu.P. Stetskov. Production of High-purity Aluminum by Zonal Melting. 489
- The method, based on the separation of elements during crystallization, makes it possible to obtain aluminum 99.9999 percent pure, but is at present very costly and time consuming.
- Reep. Ed.: B.I. Medvedev, V.Ye. Rezon, Yu.V. Latash. New Method for "Electrical Casting" of Ingots 495
- The ingot is formed of metal from one or more melting electrodes.
- Card 10/32

BEREZIN, A. B., and STEPANOV, Yu. M.

"To Produce Aluminum of Very High Purity by the Sonic Smelting Method"
lecture given at the International Metallurgists' Conference, Moscow 26-30
June 56

Source CS-3,302,240. 11 Jan 57.

Fission Cross Section of U^{235} and Th^{232} for Neutrons SOV/89-5-6-16/25
With an Energy of 14.5 MeV

was obtained.

By using $\sigma_f(U^{238})$ for 14.6 MeV neutrons (according to reference 2), $\sigma_f(U^{235}) = 2.30 \pm 0.15$ b was obtained.

The fission cross section for Th^{232} was measured by means of an ionization chamber (for the arrangement of the apparatus see reference 2). The thorium layer precipitated on platinum (Ref 1) had a surface density of ~ 0.5 mg/cm² and contained 16.6 ± 0.5 mg Th. $\sigma_f(Th^{232})$ was measured as amounting to 0.37 ± 0.02 b. This result agrees well with the data of reference 3.

The results were discussed with N. N. Flerov. There are 3 references, 2 of which are Soviet.

SUBMITTED: August 7, 1958

Card 3/3

Fission Cross Section of U^{235} and Th^{232} for Neutrons SOV/89-5-6-16/25
With an Energy of 14.6 MeV

On to the inner surface of the foil an uranium layer was electrolytically applied (the layer in the first chamber was of natural uranium, that in the second chamber contained 97 % enriched U^{235}). Length of the layer: 6.5 cm; surface density: natural uranium $\sim 2 \text{ mg/cm}^2$, $U^{235} \sim 0.5 \text{ mg/cm}^2$.

The chambers were housed in a graphite prism ($60.60.70 \text{ cm}^3$). There was also a Po-Be-neutron source which was surrounded by 4 cm of paraffin. In connection with other measurements, a tritium target (ion accelerator tube) was used as a neutron source. As monitor, a proportionality counter was used, which counted the α -particles of the reaction $T(d,n)He^4$. In order to suppress the scattered neutrons, the chamber was surrounded by a Cd-sheet of 1 mm thickness and by boron carbide of 10 cm thickness.

After carrying out some minor corrections

$$\frac{\sigma_f(U^{235})}{\sigma_f(U^{238})} = 2.03 \pm 0.09$$

Card 2/3

21(7)

AUTHORS: Berezin, A. A., Stolyarov, G. A., SOV/89-5-6-16/25
~~Nikol'skiy, V. V.~~, Chelnokov, I. Ye.

TITLE: Fission Cross Section of U^{235} and Th^{232} for Neutrons With an Energy of 14.6 MeV (Secheniye deleniya U^{235} i Th^{232} neytronami s energiyey 14.6 Mev)

PERIODICAL: Atomnaya energiya, 1958, Vol 5, Nr 6, pp 659-660 (USSR)

ABSTRACT: The fission cross section of U^{235} was measured from the ratio

$$\frac{\sigma_f(U^{235})}{\sigma_f(U^{238})}$$

for neutrons of equal energy. The ionization chambers, which contained U^{235} and U^{238} , were, one after another, subjected to irradiation by neutrons (d-t-reaction; ion acceleration tube. $E_d = 140$ keV. Angle between ionization chamber and deuteron beam 0°). Both chambers were connected with the same linear amplifier with constant impulse threshold value. The ionization chambers had thin walls. The external cylindrical electrode (diameter 2.5 cm) consisted of a platinum foil.

Card 1/3

The Fission Cross Section of U^{238} for Neutrons With SOV/89-5-6-14/25
an Energy of 14.6 MeV

background, the absorption of the fission fragments in the sublayer, and the inelastic scattering on the walls of the tritium target and on the walls of the ionization chamber into account, the following expression was found for $E_n = 14.6$ MeV :

$$\sigma_f = (1.13 \pm 0.05) \text{ b}$$

These values agree well with the data obtained by R. K. Smith and R. L. Henkel (Ref 3). There are 1 figure and 3 references, 2 of which are Soviet.

SUBMITTED: August 7, 1958

Card 2/2

21(7)

AUTHORS: Flerov, N. N., Berezin, A. A., Chelnokov, I. Ye. SOV/89-5-6-14/25

TITLE: The Fission Cross Section of U^{238} for Neutrons With an Energy of 14.6 MeV (Secheniye deleniya U^{238} neytronami s energiyey 14.6 Mev)

PERIODICAL: Atomnaya energiya, 1958, Vol 5, Nr 6, pp 657-657 (USSR)

ABSTRACT: For the measurements carried out in 1952 a thin-walled ionization chamber was used. A platinum foil was fastened to one of its electrodes, upon which a natural layer of uranium was applied electrolytically. This uranium layer had a diameter of 7.2 cm and a surface density of 0.5 mg/cm^2 . The quantity of uranium was measured by weighing and by counting α -activity. The results obtained agree with an accuracy of $\pm 1\%$. The ionization chamber was placed at a certain distance from a tritium target, which was located in an ion-acceleration tube. The deuterons were accelerated up to 140 keV. The construction of the α -counter and the method of absolute measurement of the neutron flux is described more in detail by reference 2.

Card 1/2 After carrying out a number of corrections which take the

BEREZIN, A., kand.med.nauk; MEDOVAR, A.; KAPEL'NIK, A.

"Business" in medicine. Okhr. truda i sots. strakh. 5 no.9:
46-47 S '62. (MIRA 16:5)

1. Rukovoditel' sektora zarubezhnogo zdravookhraneniya Ukrainского
nauchno-issledovatel'skogo instituta kommunal'noy gigiyeny (for
Berezin). 2. Sotrudniki sektora zarubezhnogo zdravookhraneniya
Ukrainskogo nauchno-issledovatel'skogo instituta kommunal'noy
gigiyeny (for Medovar, Kapel'nik).

(UNITED STATES--MEDICAL CARE)

BEREZIN, A.

Organization work gives greater strength to assumed obligations.
Avt.transp. 39 no.4:3-5 Ap '61. (MIRA 14:5)

1. Nachal'nik Dmitrovskoy avtotransportnoy kontory.
(Socialist competition) (Transportation, Automotive)

BEREZIN, A., kand. sel'skokhoz. nauk; KHARIN, N.

New methods in forest surveys. NTO no.12:20 D '59 (MIRA 13:3)

1. Chleny Nauchno-tekhnicheskogo obshchestva Lesnoy promyshlennosti,
g. Leningrad.
(Forest surveys)

BEREZIN, A.

Our experience in building apartment houses by ourselves. Avt. transp.
36 no.1:35 Ja '58. (MIRA 11:1)

1. Nachal'nik Dmitrovskoy avtotransportnoy kontory.
(Dmitrov District--Apartment houses)

BEREZIN, A.

Cost Accounting

Document and accounting organization in lowering production costs at each stage of the operation.

Bukhg. uchët 11, no. 9, 1952

HEREZIN, A.

Министерство государственной безопасности СССР

After the plenum of the party committee. Voen. znan. 40
no. 10:18-19 O '64. (MIRA 17:12)

1. Sekretar' partiynogo komiteta Luninskogo proizvodstvennogo
kolkhozno-sovkhoznogo upravleniya Penzenskoy oblasti.

VLASYUK, P.A., akademik, red.; ROMANENKO, I.N., akademik, red.; RODIONOV, S.P., red.; TYULENEV, red.; PSHENICHNYI, P.D., akademik, red.; DAVYDOV, kand.ekon.nauk, red.; KUGUKALO, I.A., kand.ekon.nauk; ~~BEREZIKOV, V.S., red.~~; FEDIN, A.D., red.; KOZAKEVICH, T.A., red. izd-va; SIVACHENKO, Ye.K., tekhn.red.

[Proceedings of the Conference on Problems in Developing Production in Polesye] Konferentsiia po voprosam razvitiia proizvoditel'nykh sil Poles'ia USSR. Kiev, 1955. Pt.3 [Problems in the development of agriculture in Polesye; stockbreeding and feed supply, land improvement and reclamation of swamps] Voprosy razvitiia sel'skogo khoziaistva Poles'ia; zhivotnovodstvo i kormovaia baza, melioratsiia i osvoenie bolot. Kiev, Izd-vo Akad. nauk USSR. 1958. 208 p. (MIRA 12:1)

1. AN USSR; Ukrainskaya akademiya sel'skokhoz.nauk i Vsesoyuznaya akademiya sel'skokhoz.nauk im. V.I. Lenina (for Vlasyuk). 2. Ukrainskaya akademiya sel'skokhoz.nauk, chlen-korrespondent Vsesoyuznoy akademii sel'skokhoz. nauk im. V.I. Lenina (for Romanenko). 3. Chlen-korrespondent AN USSR (for Rodionov, Tyulenev). 4. Institut fiziologii rasteniy i agrokhimii AN USSR (for Tyulenev). 5. Ukrainskaya akademiya sel'skokh. nauk (for Pshenichnyy). 6. Zamestitel' nachal'nika otдела svodnykh perspektivnykh planov Gosplana USSR (for Berезikov). 7. Nachal'nik podotдела sel'skogo khozyaystva otдела svodnykh perspektivnykh planov Gosplana USSR (for Fedin). (Polesye--Agriculture)

BEREZIKOV, V. S.

ROMANENKO, I.N., akademik, otvetstvennyy red.; VLASYUK, P.A., akademik, red.; ZEROV, D.K., akademik, red.; RODIONOV, S.P., red.; TYULENEV, N.A., red.; PSHENICHNYI, P.D., akademik, red.; DAVYDOV, G.M., kand. ekon. nauk, red.; KUGUKALO, I.A., kand. ekon. nauk, red.; ~~BEREZIKOV, V.S.~~, red.; FEDUN, A.D., red.; KOZAKEVICH, T.A., red. izd-va; SIVACHENKO, Ye. K., tekhn. red.

[Problems in the economy of Polesye; transactions of a conference]
Voprosy ekonomiki Poles'ia; trudy konferentsii. Kiev, Izd-vo Akad. nauk USSR. Vol. 4. 1958. 134 p. (MIRA 11:10)

1. Konferentsiya po voprosam razvitiya proizvoditel'nykh sil Poles'ya USSR. 1955. 2. Akademiya nauk USSR (for Vlasjuk, Zerov.).
3. Ukrainskaya Akademiya sel'skokhozyaystvennykh nauk (for Vlasjuk, Romanenko, Pshenichnyy). 4. Vsesoyuznaya Akademiya sel'skokhozyaystvennykh nauk im. V.I.Lenina (for Vlasjuk). 5. Chlen-korrespondent Vsesoyuznoy Akademii sel'skokhozyaystvennykh nauk im. V.I.Lenina (for Romanenko). 6. Chlen-korrespondent Akademii nauk USSR (for Rodionov, Tyulenev). 7. Zamestitel' nachal'nika otdela svodnykh perspektivnykh planov Gosplana Soveta Ministrov USSR (for Berezikov).
8. Nachal'nik podotdela sel'skogo khozyaystva i zagotovok otdela svodnykh perspektivnykh planov sel'skogo khozyaystva Gosplana Soveta Ministrov USSR (for Fedun),
(Polesye--Economic conditions)

VLASYUK, P.A., akademik; ZEROV, D.K., akademik; PSHENICHNYI, P.D., akademik;
 ROMANENKO, I.N., akademik, otvetstvennyy red.; MOVCHAN, V.A.;
 RODIONOV, S.P.; TYLENEV, N.A.; DAVYDOV, G.M., kand. ekon. nauk;
 KUGUKALO, I.A., kand. ekon. nauk; BEREZIKOV, V.S.; FEDUN, A.D.;
 GRUDZINSKAYA, O.S., red. izd-va; YURCHISHIN, V.I., tekhn. red.

[Natural conditions and resources of the Polesye; transactions of
 the Conference on Problems of the Development of the Productive
 Forces of the Ukrainian Polesye] Prirodnye uslovia i resursy
 Poles'ia; trudy konferentsii po voprosam razvitiia proizvoditel'-
 nykh sil Poles'ia USSR. Kiev. Pt.1. 1958. 123 p. (MIRA 11:7)

1. Akademiya nauk URSS, Kiev. Rada po vyvchenniu produktivnykh syl.
 2. Akademiya nauk USSR (for Vlasjuk, Zerov). 3. Ukrainskaya
 akademiya sel'skokhozyaystvennykh nauk (for Vlasjuk, Pshenichnyy,
 Romanenko). 4. Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk
 imeni V.I. Lenina (for Vlasjuk). 5. Chlen-korrespondent Vsesoyuz-
 noy akademii sel'skokhozyaystvennykh nauk imeni V.I. Lenina (for
 Romanenko). 6. Chlen-korrespondent akademii nauk USSR (for Movchan,
 Rodionov, Tyulenev). 7. Zamestitel' nachal'nika otdela svodnykh
 perspektivnykh planov Gosplana USSR (for Berezikov). 8. Nachal'nik
 podotdela sel'skogo khozyaystva otdela svodnykh perspektivnykh planov
 Gosplana USSR (Fedun).

(Polesye---Natural resources)

BEREZIKOV, V.S.

BOGORAD, D.I., kandidat ekonomichnikh nauk; BEREZIKOV, V.S., glavnyy
redaktor.

[Development of fuel and power resources of the Ukraine during the
sixth five-year plan] Rozvytok palyvno-energetychnoi bazy Ukrainy
v shostii p'iatyrichsi. Kyiv, Tovarystvo dlia poshyrennia polit.
i naukovykh znan' URSS, 1957. 27 p. (MLRA 10:8)
(Ukraine--Fuel) (Ukraine--Power engineering)

L 10772-66

ACC NR: AP5026217

generator (generator of standard signals G4-7A); piezoquartz converter-transducers (between which the specimen is placed, in distilled water); amplifier (series connected of type UZ-3); oscillograph (impulse type S1-31). The apparatus, described in detail in the report, was used to conduct measurements on three samples of single crystal silicon and two of germanium, with an ultrasonic beam of 2.5 millimeter diameter along different crystallographic directions (the three mutually perpendicular faces of the rectangular parallelepiped crystals coincided with the planes (111), (110), (211); crystal sizes 20 to 50 millimeters along the long edge). Frequencies used were 21 to 10⁴ megahertz at temperatures from 16 to 80°C. The silicon (n-type, doped with phosphorus) had specific resistivities from 10 to 45 ohm-cm; the germanium (n-type, doped with antimony), 26 to 40 ohm-cm. The density of the dislocations varied from 10² to 10⁴ cm⁻². The elastic stresses were studied by means of the polariscope PIK-1 at the Institute of Crystallography, Academy of Sciences SSSR. The greatest stresses were found to occur in those portions adjoining the angles (vertices, edges). It is concluded that a definite correlation exists between the velocity of propagation of ultrasound and the internal stresses in a given region or a crystal. Differences in the velocities of ultrasound along different directions amount to a maximum of 10 millipercents, which is sufficient to permit the observation of structural inhomogeneities in germanium and silicon single crystals. It is recommended that future investigations study crystals with known defects and their distribution. Orig. art. has: 4 figures, 3 tables.

SUB CODE: 14,20/

SUBM DATE: 26May65/

ORIG REF: 003/

OTH REF: 001

ultrasonic inspection

Card 2/2

L 10772-86 EWT(a)/EWT(m)/EWP(c)/EWP(v)/T/EWP(t)/EWP(k)/EWP(b)/EWP(l)/EWA(h)/
ACC NR: AP5026217 EWA(c)/ETC(m) IJP(c) SOURCE CODE: UR/0381/65/000/004/0060/0065
JD/WW

AUTHOR: Baranovskiy, S. H.; Sheloput, D. V.; Berezikov, D. D.

ORG: Novosibirsk Electrical Engineering Institute (Novosibirskiy elektrotekhnicheskii institut)

TITLE: Study of the inhomogeneity of the crystal structure of Ge and Si from the speed of ultrasound in different portions of the crystal

SOURCE: Defektoskopiya, no. 4, 1965, 60-65

TOPIC TAGS: ultrasonic inspection, semiconductor crystal, crystal structure, crystal defect

ABSTRACT: Experimental data from measurements of the relative variations in the velocity of ultrasound in different parts of single crystals of germanium and silicon and the elastic stresses in them are utilized to study the distribution of structural defects. The procedure for observing small relative variations in the velocity is based on the probing of different parts of the crystal by a narrow ultrasonic beam. Such ultrasonic methods of crystal study are derived from the dependence of the modulus of elasticity and internal friction on the real crystal structure. The impulse ultrasonic apparatus used in the experiments consists of the following: modulator and synchronizer (video-impulse generator G5-15); high frequency signal

UDC: 620.179.16 : 620.18

Card 1/2

ADRIANOV, P.K.; ANDRIANOV, S.M.; BEBZIKOV, B.S.; GOLOVKO, V.G. [Holovko, V.H.]; DOBROVOL'SKIY, A.V. [Doborovol's'kyi, A.V.]; DOVGAL', M.F. [Dovhal', M.F.]; YELIZAROV, V.D. [Ielizarov, V.D.]; ZHIZDRINSKIY, V.M. [Zhyzdryns'kyi, V.M.]; ZVENIGORODSKIY, O.M. [Zvenigoroda'kyi, O.M.]; ZAYCHENKO, R.M. [Zaichenko, R.M.]; IVANENKO, Ye.I. [Ivanenko, I.I.]; KOMAR, A.M.; KOS'YANOV, O.M.; KAZAKOV, O.I.; KOSENKO, S.K.; KLIMENKO, T.A.; KIR'YAKOV, O.P.; KALISHUK, O.L.; LELICHENKO, M.T.; LEBEDICH, M.V.; MIKHAYLOV, V.O. [Mykhailov, V.O.]; MOROZ, I.I.; MOSHCHIL', V.Yu. [Moshchil', V.IU.]; NEPOROZHNIY, P.S. [Neporozhni, P.S.]; NEZDATNIY, S.M. [Nezdatnyi, S.M.]; NOVIKOV, V.I.; POLEVOY, S.K. [Polevoi, S.K.]; PEREKHREST, M.S.; PUZIK, O.Ye. [Puzik, O.E.]; RADIN, K.S.; SLIVINSKIY, O.I. [Slivins'kyi, O.I.]; STANISLAVSKIY, A.I. [Stanislavs'kyi, A.I.]; USPENSKIY, V.P. [Uspens'kyi, V.P.]; KHORKHOT, O.Ya.; KHILYUK, F.P.; TSAPENKO, M.P.; SHVETS, V.I.; MAL'CHEVSKIY, V. [Mal'chevs'kyi, V.], red.; ZELENIKOVA, Ye. [Zelenkova, E.], tekhn.red.

[The Ukraine builds] Ukraina buduie. Kyiv, Derzh.vyd-vo lit-ry
z budivnytstva i arkhitekt., 1957. 221 p. (MIRA 11:5)
(Ukraine--Construction industry)

L 54868-65

ACCESSION NR: AP5013852

new high-coercivity (5000 oe) alloys of the cobalt-platinum system. M. A. Rozenblat et al. discussed the theory and design of magnetic analog computing devices (adder, integrator, multiplier) based on single-stage magnetic amplifiers using magnetic analog storage.

A large number of reports was devoted to the theory and application of power magnetic devices. The papers presented by the Gor'kiy school of A. M. Barmdas concerning frequency multipliers and voltage stabilizers were of great interest in this field.

ASSOCIATION: none

SUBMITTED: 00

NO REP SOV: 000

ENCL: 00

OTHER: 000

SUB CODE: DP, IE

ATD PRESS: 4021-Y

Card 5/5

L 54068-63

ACCESSION NR: AP5013852

sky et al. A. S. Sverdlov and others presented results of developing working storage units using miniature memory cubes made with multiaperture ferrite plates. 7

Thin-film technology was discussed in several reports. A paper by Ye. F. Berezhnyy et al. dealt with the development of a super storage device built on thin-film matrices with conductive substrates with a capacity of 64 56-bit words and a cycle of 400 nsec. Experiments with magnetic-film storage devices produced by electrochemical deposition on glass and metal cylindrical substrates were discussed, and a method of using an element of cylindrical magnetic film in a matrix storage device was also reported.

A. Tutauskas and R. Litvinaytis reported on a stable storage device with a short access time, a capacity of 512 x 32 bits, an access rate of 500 kc, and a readout time of 1 usec. A. B. Lyasko et al. have developed a small decade counter of periodic and nonperiodic signals in which a parametric element with five stable phase states was used. The counter displays better energy properties than other known counters, high reliability, and high noise immunity. A. G. Rabin'kin reported on the characteristics of

Card 4/5.

I 5486R-65

ACCESSION NR: AP5013852

element. It is capable of performing command recording or readout of information reaching it in large quantities from a low-power FTE. I. A. Tyumin, B. A. Yefimov, and A. A. Shavrov reported on the development and testing of blax-type logic circuits operating at 1 Mc and performing several logic operations. Advantages cited are: high s/n ratio, about 20; high switching rate, about 2 Mc; and high reliability due to the simplicity of the circuit. Such circuits may also be used in complex logic devices. Additional reports discussed logic circuits using blax-type elements in a working storage device with a nondestructive readout cycle of 10^{-7} sec and a recording time for new information of several microseconds.

L. P. Afinogenov et al. reported on discrete and discrete-analog computer units based on the use of the area of an emf pulse originating in the winding during magnetization reversal in the ferrite. Development of ferrite matrixes which release a voltage pulse at the output with an area proportional to the code supplied at the matrix input was also discussed.

Problems connected with the development of single-wire memory elements with multiaperture ferrite plates were presented by R. A. Lashev-

Card 3/3

L 54262-45

ACCESSION NR: AP5013852

production, and application of magnetic and magnetic-semiconductor elements. Reports were presented for seven areas: digital and analog elements, memory devices, magnetic power devices, magnetic amplifiers and converters, parametrons, and power sources.

At the opening plenary session, M. A. Rozenblat presented a survey of the present state of contactless magnetic elements, which he considers to be one of the most efficient and promising technical means of automation and computer technology. Problems of designing logic elements to provide stable operation for various types of circuits were discussed in a series of reports. B. A. Yefimov and G. N. Chizhukhin reported on the development of modules of ferrite-transistor elements (FTE) which can be used for various types of computers and also for discrete automation for general and special purposes. This system provides reliable operation at a 200-ko clock frequency in the -10 to +50° C temperature range.

The same authors together with M. A. Aksenov reported on the development of a general-purpose heavy-duty FTE which can be used as a cell of a clock-frequency pulse generator or as an independent heavy-duty control

Card 2/5

L 34358-55
 EWT(d)/EWT(m)/EEC(k)-2/EWP(1)/EWP(v)/T/EWP(t)/EWP(k)/EWP(h)/EED-2/ //
 EWP(h)/EWP(1)/EWA(c) Pq-4/Pf-4/Pad/Pq-4/Pk-4 LTP(c) BB/JD/WW/JG/CG
 UR/0103/65/026/005/0918/0942
 ACCESSION NR: AP5013852 681.142.6
 AUTHOR: Boyarchenkov, M. A.
 TITLE: All-Union Conference on magnetic elements of automation and computer technique
 SOURCE: Avtomatika i telemekhanika, v. 26, no. 5, 1965, 938-942
 TOPIC TAGS: electric engineering conference, magnetism conference, computer component, automation equipment, automation, electronic data processing
 ABSTRACT: The Ninth All-Union Conference on Magnetic Elements of Automation and Computer Technology, held in Kaunas from 7 to 10 September 1964, was organized by the National Committee of the USSR on Automatic Control, the Institute of Power and Electrical Engineering of the Academy of Sciences, Lithuanian SSR, the Lithuanian Scientific and Technical Society of the Instrument Building Industry, and the Institute of Automation and Telemechanics of the Main Committee on Instrument Building, Means of Automation, and Control Systems under Gosplan and the Academy of Sciences USSR. Over 450 participants discussed some 90 reports concerning the theory, design,
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| Ch. XI. The Mechanization of Obsolete Enterprises as a Means of Increasing Labor Productivity [D. Škarnar, Vítkovice Metallurgical Plant imeni Klement Gottwald, Ostrava] | 410 |
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Z. Kejval, V. Krauz, F. Kupka, F. Majer, K. Marvan, J. Novák, J. Odabnal, K. Paul, B. Samser, M. Homz, J. Částka, V. Šindelar, and J. Šolc; Eds.: A. Nejepea and M. Vlk.

PURPOSE: This book is intended for engineers and scientific personnel concerned with the pressworking of metals.

COVERAGE: Published jointly by Mashgiz and SNTL, the book discusses the present state of the pressworking of metals in the USSR and the Czechoslovak Socialist Republic. Chapters were written by both Soviet and Czechoslovak writers. No personalities are mentioned. There are 129 references: 98 Soviet, 16 English, 8 German, 5 Czech, and 2 French.

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PRESSWORKING IN THE USSR

Ch. I. The Characteristics of Forging Shops in USSR Plants [A.I. Zimin and Ye.P. Unksov]

Ch. II. Methods of Calculating the Pressure for Forging in the Pressworking

Card 2/8

BEREZHOVSKIY, D.I.

SOV/5799

Unkov, Ye.P., Doctor of Technical Sciences, Professor, Ed.
Sovremennoye sostoyaniye kuznechno-shtampovogo proizvodstva (Present State
of the Pressworking of Metals) [Moscow] Mashgiz, 1961. 434 p. 5000 copies
printed.

Ed. of Publishing House: A.I. Sirotnin; Tech. Ed.: B.I. Model'; Managing Ed. for
Literature on the Hot Working of Metals: S.Ya. Golovin, Engineer.

Title: Kuznechno-shtampovoye proizvodstvo v SSSR (The Pressworking of Metals
in the USSR) by: A.V. Altyks, D.I. Berezhkovskiy, V.F. Volkovitskiy, I.I.
Girsh (deceased), L.D. Goltman, S.P. Granovskiy, N.S. Dobrinov, Ye.N. Zimin,
S. L. Zlotnikov, A.I. Kagalovskiy, P.V. Lobachev, V.N. Martynov, Ye.L. Mosh-
nin, G.A. Nevrotskiy, Ya.M. Okhrimenko, O.N. Rovinskii, Ye.A. Stosha, Yu.L.
Rozhdestvenskiy, N.V. Tikhomirov, Ye.P. Unkov, V.F. Shcheglov, and L.A. Pkof-
man; Eds: Ye.P. Unkov, Doctor of Technical Sciences, Professor, and B.V. Roz-
nov.

Title: Kuznechno-shtampovoye proizvodstvo v ChSSR (The Pressworking of Metals
in the Czechoslovak SR) by: S. Burda, F. Brazdil, F. Drastik, F. Zlatohlavek

Card 1/8

BEREZHNYUK, V.I.

Gas industry of the Ukraine for the last ten years. Neft.
i gaz. prom. no.2:34-36 Ap-Je '64. (MIRA 17:9)

ILLEGIBLE

ILLEGIBLE

ILLEGIBLE

ILLEGIBLE

ILLEGIBLE

ILLEGIBLE

OKHRIMENKO, I.S.; KOBETSKAYA, V.M.; USTINOVA, O.N.; BEREZHNYKH, T.A.

Changes of styrene-butadiene latexes in lacquer coatings. Lakokras.mat.
i ikh prim. no.4:26-30 '60. (MIRA 13:10)

1. Leningradskiy tekhnologicheskij institut im. Lensoveta.
(Paint materials) (Butadiene) (Latex)

TYUDESH, F.; KENDE, I.; BEREZHNYKH, T.; SOLODOVNIKOV, S.P.; VOYEVODSKIY, V.V.

Radicals as intermediate products in the inhibition of radical polymerization reaction. Kin. i kat. 6 no.2:203-211 Mr-Ap '65. (MIRA 18:7)

1. Tsentral'nyy nauchno-issledovatel'skiy institut khimii AN Vengerskoy Narodnoy Respubliki i Institut khimicheskoy fiziki AN SSSR.

BEREZHIANI, V.M.

Category : USSR/Solid State Physics - Phase Transformation in Solid Bodies

E-5

Abs Jour : Ref Zhur - Fizika, No 2, 1957 No 3849

Author : Berezhiani, V.M.

Title : Investigation of the Processes of Phase Transformation in Aging Aluminum Alloys Using the Electric Resistance Method.

Orig Pub : Tr. In-ta metalli i gorn. dela. AN GruzSSR, 1956, 7, 81-108

Abstract : An investigation was made of the process of the phase transformations in aging aluminum alloys by plotting the temperature vs. specific resistivity, temperature vs. temperature coefficient of resistivity and temperature vs. aging effect and by making isochronic (10-minute) sections.

Card : 1/1

BMREZHIANI, V.M.

The mechanism of forming stable phases in ageing aluminum alloys.
Soob. AN Gruz. SSR 16 no. 10:803-807 '55. (MLRA 9:5)

1. Akademiya nauk Gruzinskoy SSR, Institut metalla i gornogo dela,
Tbilisi. Predstavleno deystvitel'nyy chlenom Akademii R.I.
Agladze.

(Aluminum alloys--Hardening)

Berezhiani, V. M.

USSR/Physics - Technical physics

Card 1/1 Pub. 22 - 20/47

Authors : Berezhiani, V. M.

Title : Mechanism of artificial aging of aluminum alloys

Periodical : Dok. AN SSSR 98/5, 773-775, Oct 11, 1954

Abstract : The three-phase conversion stages observed in Al-Cu and Al-Cu-Mg alloys during artificial aging are described. It was established that the first stage of phase conversion takes place at temperatures much lower than the second and third conversion-phases which occur at a practically identical temperature. The role of the time factor, which does not change the nature of conversion but shifts it toward much lower temperatures, is explained. Eight references: 1-USA; 1-German; 1-French and 5-USSR (1940-1952). Table; graphs.

Institution : Academy of Sciences Georgian-SSR, Mining and Metals Institute

Presented by: Academician G. V. Kurdyumov, April 30, 1954

ILLEGIBLE



BEREZHLANI, V. M.

Chemical Abstracts
May 25, 1954
Metallurgy and Metallography

Shapes made from electrolytic manganese by the metallo-ceramic method. R. I. Agladze, V. M. Berezhlani, and L. I. Topchashvili (Inst. Metals & Mining Acad. Sci. Georgian S.S.R., Tbilisi). *Sobremennaya Akad. Nauk Gruzii. S.S.R.* 13, 299-306 (1952).—Powders and plates of electrolytic Mn were shaped under pressures of 1-8 tons/sq. cm. and then sintered at 700-1100°. Pressure and grain size had little effect on d. of green shapes. Crushing strength of green shapes made of plates and coarse powders (0.5-0.25 and 1.0-0.5 mm.) increased as pressure increased from 2.2 to 8.0 tons/sq. cm., while that of shapes made of fine powders (0.05 to 0.25 mm.) increased sharply up to pressure of 6 tons/sq. cm. and then dropped with rising pressure. Sintering for 1 hr. at 1100° was sufficient to obtain satisfactory products. D. of sintered products increased with dispersion of powders. B. Z. Kamich

SECRET / DR, S. I.

"Comparative Histology and the Epithelium of the Esophagus of Vertebrate Animals."
Cand Biol Sci, Yerevan Zooveterinary Inst, 10 Mar 54. Dissertation (Received Yerevan,
27 Feb 54)

SO: SU. 126, 19 Aug 1954

USSR/Pharmacology. Toxicology. Local anesthetics

V

Abs Jour : Ref Zhur - Biol., No II, 1958, No 51976

of I depends upon the severity of the pathological process.
-- T.P. Veselova.

Card. : 2/2

USSR/Pharmacology. Toxicology. Local Anesthetics

V

Abs Jour : Ref Zhur - Biol., No II, 1958, No 51976

Author : Berezhov N.K., Shishova V.I.
Inst : Buryat-Mongolia Zooveterinary Institute
Title : Changes in the Cell Composition of the Peripheral Blood
in Horses Under the Effect of Novocaine Block

Orig Pub : Tr. Buryat-Mong. zoovet. in-ta, 1956, vyp. 10, 155-167

Abstract : Nineteen horses, undergoing surgical operations were subjected to lumbar block (LB), by administration of novocaine (I) in 0.25 percent solution, in doses of 1 ml/kg. It was established that LB caused an elevation of body temperature and leucocytosis. The sharpest rise in body $t^{\circ}C$ and in the leucocyte count occurred within the first 30 minutes following administration of I, reaching its highest level within 3 hours and returning to normal within 24 hours. The absolute increase of the leucocyte count was due to an increase of stab neutrophils. It was demonstrated that the degree of the febrile reaction following administration

Card : 1/2

USLONTSEV, B., nauchnyy sotrudnik; BERESHNYI, M.

Using assembly-line methods in constructing livestock buildings with arched roofs. Sil' bud. 9 no.8:13-16 Ag '59. (MIRA 12:12)

1.Sektor tekhnologii i organizatsii sel'skogo stroitel'stva Akademii stroitel'stva i arkhitektury USSR (for Uslontsev). 2.Predsedatel' Izyumskoy mezhkolkhoznoy stroitel'noy organizatsii Khar'kovskoy oblasti (for Bereshnyy).

(Kharkov Province--Farm buildings) (Assembly-line methods)

BEREZHNYY, M.; TOPTYGIN, V. [Toptyhin, V.]

Let's increase the production of local building materials.
Sil'. bud, 7 no.4:14-15 Ap '57. (MIRA 12:11)

1. Predsedatel' soveta Izyumskoy rayonnoy kolkhoznoy stroitel'-
noy organizatsii Khar'kovskoy oblasti (for Berezhnyy). 2. Glavnyy
inzhener Izyumskoy rayonnoy kolkhoznoy stroitel'noy organizatsii
Khar'kovskoy oblasti (for Toptygin).
(Kharkov Province--Building materials)

L 12136-66

ACC NR: AP5023545

sterilized in hot water at 96 — 98C for 35 — 45 min, then cooled in water at 45C for 33 min. Temperature diagrams taken inside the bottles by means of thermocouples show that this is sufficient for complete sterilization of seed-free tomato juice. One of the machines produces 1400 bottles per hour. It is 15,500 mm long with an operating chamber 2680 mm wide and 1650 mm high. Orig. art. has: 3 figures.

SUB CODE: 06 / SUBM DATE: none

HW

Card 2/2

(A) L 12136-65

ACC NR: AP5023545 SOURCE CODE: UR/0330/65/000/008/0015/0022

AUTHOR: Shteynberg, R. V. (Senior research associate); Berazhnyak, Ye. D. (Senior research associate); Trostinskaya, L. O. (Senior research associate)

ORG: Ukrainian Scientific-Research Institute of Canned Food Industries (Ukrainskiy nauchno-issledovatel'skiy institut konservnoy promyshlennosti)

TITLE: Selection of conditions for tomato juice sterilization without counterpressure

SOURCE: Konservnaya i ovoshchesushil'naya promyshlennost', no. 8, 1965, 18-22

TOPIC TAGS: food product machinery, food technology

ABSTRACT: Tests, described in detail in this article, showed that it is possible to sterilize without counterpressure tomato juice packed in SKO-83-3 bottles. The critical cover pressure for such bottles is $(1.82-1.93) \cdot 10^5$ n/m². During sterilization in boiling water this critical pressure drops to $(0.81-1.37) \cdot 10^5$ n/m². The pressure within the bottles during sterilization of tomato juice packed at 90°C does not exceed $(0.71-0.72) \cdot 10^5$ n/m². Heat removal reduces the critical cover pressure to $(0.12-0.16) \cdot 10^5$ n/m² making possible the sterilization outside autoclaves, in simple, continuously operating devices. Appropriate apparatus, designed by the Ukrainian Scientific-Research Institute of Canned Food Industries (Ukrainskiy nauchno-issledovatel'skiy institut konservnoy promyshlennosti), has been successfully operated for several years. The juice is packed at temperatures not less than 85°C and is sealed and

Card 1/2 UDC: 664.8.617.089.036.5: 614.48

PEVZNER, R.L., doktor tekhnicheskikh nauk, professor; BEREZHNYI, A.S.,
doktor tekhnicheskikh nauk, professor, redaktor; GLEBOV, S.V.,
nauchnyy redaktor; GRINBERG, I.F., redaktor [deceased]; LYUDKOV-
SKAYA, N.I., tekhnicheskii redaktor

[Thermit corundum, its properties and use] Termitokorund, ego svoistva
i primeneniye. Pod. red. A.S. Bereshnogo. Moskva, Gos. izd-vo lit-ry
po stroit. materialam, 1954. 75 p. (MLRA 7:8)

1. Chlen-correspondent AN USSR (for Bereshnyy)
(Refractory materials) (Thermit) (Corundum)

USSR/Medicine - Physiology

BEREZHNYKH, D.V.

BEREZHNYKH, D.V.

FD-3389

Card 1/1

Pub. 17-13/22

Author : Berezhnykh, D. V.

Title : The problem of conditioned reflex restoration of immunogenesis

Periodical : Byul. eksp. biol. i med. 8, 49-52, Aug 1955

Abstract : To explain in greater detail the restoration of immunogenesis attained with acetylcholine in the laboratory of P. F. Zdrodovskiy, author injected acetylcholine subcutaneously during the course of a vaccination cycle. After the titer of agglutinines had returned to its original level, the experimental animals were given a single acetylcholine chloride injection. As a result the agglutinine titer of the experimental animals rose sharply, that of the controls, who had received only physiological solution, remained at its previous level. As non-conditioned irritant, author used warm monovaccine from an agar culture of Flexner dysentery bacilli. From the results of his experiments author concluded that acetylcholine chloride and physiological solution given parenterally coincidental with vaccination restores immunogenesis by conditioned irritants. 3 references. Table

Institution : Molotov Sci Res Inst of Vaccines and Sera (Dir. Cand Med Sci A. P. Kobyl'skiy, Sci Leader - Prof G. V. Peshkovskiy)

Submitted : 10 Feb 1955

BEREZHNYY, Z.G.

Role of mycoses of the foot in the pathogenesis of recurrent
erysipelas of the shin. Vest.derm. i ven. 33 no.3:40-42
My-Je '59. (MIRA 12:9)

1. Iz mediko-sanitarnoy chasti No.1 Moskovskogo avtozavoda imeni
Likhacheva (nach.M.F.Timofeyev, zav.kozhnym otdeleniyem P.A.
Ladunkin).

(FUNGUS DISEASES

foot, relation to pathogen. of recur. erysipelas
of shin (Rus))

(FOOT, dis.

fungus dis., relation to pathogen. of recur.
erysipelas of shin (Rus))

(ERYSIPELAS, etiol. & pathogen.

fungus dis. of foot causing recur. erysipelas
of shin (Rus))

(LEG, dis.

erysipelas, recur., caused by fungus dis. of
foot (Rus))

BEREZHNOY, Z.G.

Treatment of epidermophytosis of the foot with increasing concentrations of acetic acid. Vest.derm. i ven. 32 no.5:69-70 S-O '58 (MIRA 11:11)

1. Iz mediko-sanitarnoy chasti No.1 Moskovskogo avtozavoda imeni Likhacheva (nach. M.F. Timofeyev, zav. kozhnym otdeleniyem P.A. Ladunkin).

(RINGWORM, ther.

foot, acetic acid solution (Rus))

(ACETIC ACID, ther. use

ringworm of foot (Rus))

(FOOT, dis.

ringworm, ther., acetic acid solution (Rus))

BEREZHNOY, Yu.Z.

Cryoglobulins and C-reactive protein in the blood serum of
patients with lupus erythematosus. Vest. dermat. i ven. 39
no.4:27-30. April 1965. (MIRA 19:2)

1. Kafedra kozhnykh bolezney (zav. - prof. M.M. Zheltakov)
II Moskovskogo meditsinskogo instituta imeni Pirogova.
Submitted April 22, 1964.

BEREZHNOY, Yu.Z.

Results of a microscopic examination of the equipment in shoe-
repair shops for the presence of dermatophytes. Vest. dermat. i
ven. 34 no. 7:57-58 '60. (MIRA 13:12)
(FUNGI) (BOOTS AND SHOES---MICROBIOLOGY)

KOSHKIN, Lev Nikolayevich, laureat Gosudarstvennoy premii, kand.
tekhn. nauk; BEREZHNOY, Yuriy Nikolayevich, inzh.; FEDCHENKO, V.,
red.; NYRKOVA, N., tekhn. red.

[Whirling motion creates machines] Vikhr' rozhdaet mashiny. Mo-
skva, Molodaia gvardiia, 1962. 78 p. (MIRA 16:2)
(Machinery, Automatic)

BEREZHOV, Yu.N. Prinsipal'nyye uchastnye: PODCHUFAROV, I.I.; KOTSEN, Ye.G.;
MYSYUTIN, D.K.; DOBSHITS, M.L., otv. za vypusk; GUSEV, K.M.,
tekhn. red.

[Through forests, swamps, and mountains] Skvoz' lesa, bolota, gory;
sbornik o molodykh stroiteliakh transporta. Moskva, Orgtransstroil,
1961. 177 p. (MIRA 14:11)

1. Russia (1923- U.S.S.R.) Ministerstvo transportnogo stroitel'stva.
(Road construction) (Railroads--Construction)

GARMASH, N.S.; BEREZHNOY, Yu.I.

Adhesion to the ground of skis on walking excavators and waste disposal equipment. Ogneupory 30 no.5:22-31 '65.

(MIRA 18:5)

1. Nauchno-issledovatel'skiy gosudarstvennyy Institut.

L 29283-66 EWT(m)/T
 ACC NR: AP6019335
 SOURCE CODE: UR/0367/66/003/003/0521/0525
 AUTHOR: Sitenko, A. G.; Berezhnuy, Yu. A. 25
 8
 ORG: Physicotechnical Institute, AN UkrSSR (Fiziko-tehnicheskij institut AN UkrSSR)
 TITLE: Effect of the deuteron internal structure on diffraction scattering
 SOURCE: Yadernaya fizika, v. 3, no. 3, 1966, 521-525
 TOPIC TAGS: deuteron, particle diffraction, neutron interaction, proton interaction, deuteron scattering
 ABSTRACT: The influence of the finite radius of the neutron-proton nuclear interactions in the deuteron and of the deuteron internal structure on the magnitudes of the integral cross-sections of various diffraction interactions between deuterons and nuclei and on the differential cross-section for elastic deuteron scattering is considered. The authors express thanks to V. A. Yarmitskiy for assistance in programming the numerical calculations on an electric computer. Orig. art. has: 5 figures and 13 formulas. [Based on authors' Eng. abst.] [JPRS]
 SUB CODE: 20 / SUBM DATE: 28May65 / ORIG REF: 004 / OTH REF: 001

Card 1/1 (C)

L 21256-66

ACC NR: AP6007791

typical feature of diffraction interaction of deuterons with nuclei having a washed-out border is the low value of the cross section of diffraction splitting of the deuteron in comparison with that of other cross sections. The author thanks Professor O. G. Sytenko for his discussions and valuable suggestions. Orig. art. has: 3 figures and 29 formulas. [Based on author's abstract.] [NT]

SUB CODE: 20/ SUBM DATE: 28Apr65/ ORIG REF: 005/ OTH REF: 002/

Card 2/2

1795

1. 21256-66 ENT(m)/T

ACC NR: AP6007791

SOURCE CODE: UR/0185/66/011/002/0117/0123

AUTHOR: Berezhnoy, Yu. A.ORG: Physico-Technical Institute AN URSSR, Khar'kov (Fizyko-tekhnicheskyy instytut AN URSSR)TITLE: Diffraction scattering of deuterons by nuclei with a washed-out border

SOURCE: Ukrayins'kyy fizychnyy zhurnal, v. kk. no. 2, 1966, 117-123

TOPIC TAGS: deuteron scattering, deuteron interaction, elastic scattering, proton scattering, particle diffraction

ABSTRACT: The diffraction interaction of deuterons with nuclei characterized by the Gaussian absorption function $\sigma(q) = \sigma_0 e^{-2q^2/R^2}$ was investigated. Expressions for the amplitude of elastic scattering and the integral cross sections of various processes of the interaction of deuterons with nuclei are obtained. The behavior of integral cross sections during variations of the parameters a and R is analyzed. On the basis of values of a and R (O.G. Sytenko and V. K. Tartakovskyy, same source, no. 5, 1960, 581), obtained by an analysis of experimental data (O. Chamberlain, E. Segre, R. Tripp, C. Wiegand, and T. Ypsilantis, Phys. Rev., 100, 1659, 1956) on the scattering of protons with energy $E_p = 313$ MeV, estimates for the integral cross sections of the elastic scattering $\sigma_e = 103.1$ mbarn, of the diffraction splitting of the deuteron $\sigma_d = 116.5$ mbarn, of the deuteron absorption $\sigma_a = 80.3$ mbarn during diffraction interaction of deuterons with the nuclei of carbon C^{12} are given. A

Card 1/2

BEREZHNOY, Yu.A.

Inelastic diffraction scattering with excitation of two-phonon
nuclear states. Ukr. fiz. zhur. 8 no.9:929-934 S '63.
(MIRA 17:8)

1. Fiziko-tehnicheskii institut AN UkrSSR, Khar'kov.

SITENKO, A. G.; BEREZHNOY, Yu. A.

"Concerning the Diffraction Breakup of Deuterons."

report submitted for All-Union Conf on Nuclear Spectroscopy, Tbilisi, 14-22
Feb 64.

Inst Physics,^{AS}/UkSSR

BEREZHNOY, Yu.A.; KLYUCHAREV, A.P.; RANYUK, Yu.N.; RUTKEVICH, N.Ya.

Mechanism underlying total nuclear decay. Zhur. eksp. i teor. fiz.
45 no.4:1030-1035 0 '63. (MIRA 16:11)

1. Fiziko-tekhnicheskii institut AN UkrSSR.

Total nuclear disintegration ...

S/056/62/043/004/019/061
B102/B180

tion curve was calculated with the Sachs formula (Phys. Rev. 103, 671, 1956). The theoretical results (solid lines in the diagrams) agree very well with the measured ones. There are 5 figures.

SUBMITTED: May 18, 1962

Fig. 3.

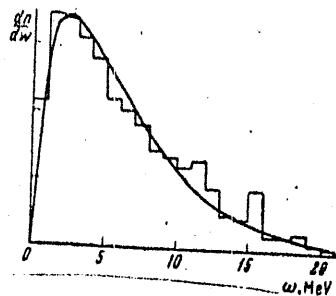


Fig. 4.

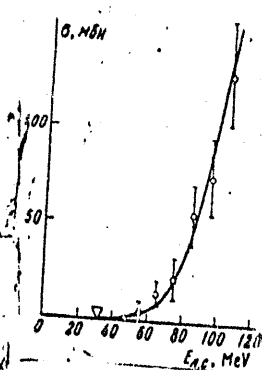
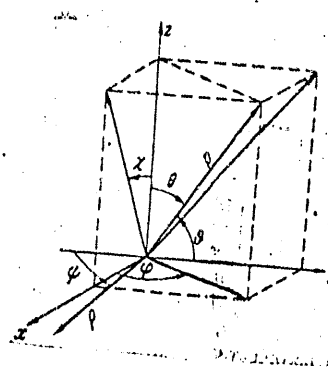


Fig. 5.



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✓C

S/056/62/043/004/019/061
B102/B180

Total nuclear disintegration ...

direct nuclear disintegration.

$$\frac{dn}{2\pi \sin \theta d\theta} = \frac{N_0 e^{-u}}{\sqrt{2\pi} \Gamma(\frac{3}{2}, u)} \int_0^{u/2} \exp\{x(1 + \cos^2 \theta)\} I_0(x \sin^2 \theta) x^{1/2} dx. \quad (6) \text{ and}$$

$$\frac{dn}{dw} = \frac{2\alpha N_0 \mu e^{-u}}{\sqrt{\pi} \Gamma(\frac{3}{2}, u)} e^{-aw} \int_0^{n/2} \operatorname{sh}\left(\sqrt{\frac{w}{\epsilon}} \sin x\right) \cos^2 x dx, \quad (7) \text{ are ob-}$$

tained using the notations from Fig. 5 and $N_0 = \int dn, u = \mu \beta^2 R^2 / 2\alpha, \mu$ is the α -particle mass, $w = p^2/2\mu$ its energy and $m_z = pp \sin \theta \cos(\psi - \phi)$ its angular momentum. The phenomenological constants α and β are determined from the total energy and the total momentum

$$E_0 = \frac{N_0 \alpha \Gamma(\frac{1}{2}, u)}{2\alpha \Gamma(\frac{3}{2}, u)}, M_0 = \frac{2N_0 u}{\beta} \left[1 - \frac{\Gamma(\frac{1}{2}, u)}{u \Gamma(\frac{3}{2}, u)} \right]. \quad (4) \quad \Gamma(a, b) = \int_0^b e^{-x} x^{a-1} dx.$$

with

$$E_0 = \int w dn, M_0 = \int m_z dn; \xi = \alpha u / 4, R \text{ is the radius of the effective volume.}$$

From the measurements $N_0 = 6, E = 36 \text{ Mev}, M_0 \approx 15 \text{ kg}$ and $R = 5f$ were found, so that with (4) $1/\alpha = 2.3^\circ \text{ Mev}, 1/\beta = 1.2 \text{ kg}$ and $u = 2$ was obtained. The excitation Card 2/3

27.600
S/056/62/043/004/019/061
B102/B180

AUTHORS: Berezhnoy, Yu. A., Klyucharev, A. P., Ranyuk, Yu. N.,
Rutkevich, N. Ya.

TITLE: Total nuclear disintegration reactions

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 43,
no. 4(10), 1962, 1248 - 1252

TEXT: In order to study the peculiarities of the alpha-group structure of light nuclei, the reaction $C^{12} + C^{12} \rightarrow 6\alpha$ was investigated with 300-400 μ НИКФИ-Д (NIKFI-D) photographic emulsions bombarded by carbon ions from the linear accelerator of the Khar'kovskiy fiziko-tehnicheskii institut (Khar'kov Physicotechnical Institute). Besides the alpha-particle energy and angular distributions, the excitation function (Fig. 4) was also measured from the threshold (designated by ∇) up to 115 Mev (laboratory system). The angular distribution of the alphas, given by $dn/\sin^2\theta = f(\theta)$ is symmetrical with a flat minimum at 90° , the energy distribution, $dn/dw = f(w)$, is shown in Fig. 3. These functions are calculated with the statistical model of Card 1/3

On the effect of...

S/185/62/007/004/001/013
D407/D301

differential scattering cross-section curves (with excitation of the first vibrational level) were also compared. It was found that theory and experiment were in good agreement in the region of large angles. The free path of α -particles in Mg^{24} -atoms was estimated; it was found to be $2 \cdot 10^{-13}$ cm, which is in good agreement with the results of other investigators. There are 4 figures and 7 references: 3 Soviet-bloc and 4 non-Soviet-bloc. The references to the English-language publications read as follows: J. S. Blair, Phys. Rev., 115, 928, 1959; D. K. McDaniels, J. S. Blair, S. W. Chen, G. W. Farwell, Nucl. Phys., 17, 614, 1960; J. S. Blair, G. W. Farwell, D. K. Daniels, Nucl. Phys., 17, 641, 1960; C. E. Porter, Phys. Rev., 99, 1400, 1955.

ASSOCIATION: Fizyko-tekhnichnyy instytut AN URSR (Physico-technical Institute of the AS UkrRSR), Kharkiv

SUBMITTED: August 21, '1961

Card 4/4

On the effect of...

S/185/62/007/004/001/018
D407/D301

$$\Phi(z) = \frac{1}{\pi \Delta^2} e^{-\frac{z^2}{\Delta^2}}, \quad (7)$$

then

$$F(\theta) = e^{-\frac{1}{4} K^2 \Delta^2 \sin^2 \theta}. \quad (8)$$

As an application of the above theory, the scattering of α -particles by Mg^{24} -nuclei is considered (elastic scattering as well as scattering with excitation of the first vibrational level of the Mg^{24} -atom). The differential cross-section curves (theoretical and experimental) of the elastic scattering are compared. The width of the spread $\Delta = 0.79 \cdot 10^{-13}$ cm. The

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D407/D301

where α is the deformation parameter, θ --the scattering angle, K --the wave vector of the incident particle, κ --the change in the wave vector during the scattering. The function $\omega(\rho)$ characterizes the absorbing properties of the nucleus. The spread of the boundary is described by the function $\omega(\rho)$:

$$\omega(\rho) = \int \omega_0(u) \Phi(|u - \vec{\rho}|) du, \quad (2)$$

where the function $\Phi(z)$ has to be a positive quantity which decreases rapidly for large values of the argument. From Eqs. (1) and (2) one obtains

$$F(\theta) = \int \Phi(z) e^{i \vec{\kappa} \cdot \vec{z}} dz, \quad (4)$$

where $F(\theta)$ characterizes the spread. If the function $\Phi(z)$ is taken in the form

Card 2/4

S/185/62/007/004/001/018
D407/D301

AUTHORS: Inopin, Ye. V., and Berezhnoy, Yu. A.
TITLE: On the effect of spread of nucleus boundary
on diffraction scattering
PERIODICAL: Ukrayins'kyi fizychnyy zhurnal, v. 7, no. 4,
1962, 343-347

TEXT: A simple method is proposed for ascertaining the effect of nuclear-boundary spread on diffraction scattering. It is shown that the free path of the scattered particles can be estimated by comparing experimental and theoretical results. The diffraction-scattering amplitude of a particle by a non-spherical nucleus is

$$f(\alpha, \theta) = \frac{1K}{2\pi} \int \omega(\rho) e^{-i\vec{x}\vec{\rho}} d\rho, \quad (1)$$

Card 1/4

BEREZHNOY, Yu.A.

Deuteron scattering by nonaxial nuclei. Ukr. fiz. zhur. 6
no.2:275-277 Mr-Apr '61. (MIRA 14:6)

1. Fiziko-tekhnicheskiy institut AN USSR, g. Khar'kov.
(Deuterons—Scattering)
(Nuclei, Atomic)

On the Diffraction Spallation of Light Nuclei SOV/56-35-5-33/56

cross section σ_d of the deuteron can be calculated from the relations $\sigma_d + \sigma_e = \sigma_t/2$, $\sigma_a + \sigma_n + \sigma_p = \sigma_t/2$. Next, approximate formulae for the limiting cases $q \gg 1$ and $q \ll 1$ are given. For the parameter q it holds that $q = 4R/\sqrt{\pi} R_d$. As a result

of diffraction the total cross section of pion-deuteron interaction is less than the sum of the total cross sections of the interaction between a pion and a neutron and a proton. Diffraction also is due to the fact that spallation of the deuteron is caused by the scattering of a pion by a deuteron in the ground state ($\sigma_d \gg \sigma_e$). In the domain $R < R_d$ the integral cross sections depend in a high degree on the selection of the wave function of the deuteron ground state. There are 2 figures and 4 references, 1 of which is Soviet.

ASSOCIATION: Khar'kovskiy gosudarstvennyy universitet (Khar'kov State University)

SUBMITTED: June 28, 1958

Card 2/2

21(7)

AUTHORS: Sitenko, A. G., Berezhnov, Yu. A.

SOV/56-35-5-38/56

TITLE: On the Diffraction Spallation of Light Nuclei (O diffraktsionnom rasshcheplenii legkikh yader)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1958, Vol 35, Nr 5, pp 1289-1291 (USSR)

ABSTRACT: In the present paper the integral cross sections of various processes of the diffraction interaction between a deuteron and a black nucleus is calculated for any ratios R_d/R . Here R_d denotes the radius of the deuteron and R the radius of the nucleus. The Coulomb (Kulon)-interaction was neglected. For the purpose of simplifying calculations a Gaussian function was used as a deuteron wave function. The comparatively easily obtained expressions for the total cross section σ_t of all processes, for the cross sections σ_n and σ_p of neutron and proton stripping respectively, and for the cross section σ_e of elastic scattering are explicitly written down. The cross sections σ_d of diffraction spallation and the absorption

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ACC NR: AT6031465

3
diffraction fission, splitting, and absorption are studied. The inelastic diffraction scattering with excitation of the collective levels of nuclei is examined. Further studies of direct nuclear processes will complement present knowledge of nuclear interaction, and the structure and properties of nuclei. In conclusion, the author expresses his deep gratitude to the scientific director, Professor A. G. Sitenko for constant guidance, useful discussions, and valuable advice. He likewise expresses his gratitude to Ye. V. Inopin for useful advice and discussions. He also takes the opportunity to express his gratitude to A. I. Akhiezer, Academician of the AN UkrSSR for constant attention and interest in the work. Orig. art. has: 30 figures, 241 formulas, and 3 tables.

SUB CODE: 20/ SUBM DATE: none/ ORIG REF: 032/ OTH REF: 030/

kh

Card 2/2

L 05823-67 EWT(m) GD

ACC NR: AT6031465

SOURCE CODE: UR/0000/64/000/000/0001/0074

AUTHOR: Berezhnov, Yu. A.

ORG: none

TITLE: Diffraction interaction of nucleons and complex particles with nuclei

SOURCE: AN UkrSSR. Fiziko-tekhnicheskiy institut. Dissertatsii. Kharkov, 1964.
Difraktsionnoye vzaimodeystviye nuklonov i slozhnykh chastits s yadrami, 1-74

TOPIC TAGS: nucleon, deuteron, particle interaction, nucleus particle diffraction, nuclear fission, particle collision, inelastic scattering

ABSTRACT: The dissertation examines various processes of diffraction interaction of nucleons and complex particles with nuclei. The influence of the structure of the colliding particles on differential and integral cross-sections of various diffraction processes are analyzed. The interaction of nucleons and deuterons with non-spherical nuclei is examined. The analysis of experimental data on the basis of the formulae obtained, provides information on the degree of deformation of non-spherical nuclei. The influence of the finiteness of the dimensions of the falling particles on the cross-section of various diffraction processes scattering,

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ACC NR:AN7004819

at the end of the five-year plan; eventually the entire country and international lines will be included. Candidate of Technical Sciences E. M. Braverman described work at the Institute to make a computer read any printed text as well as a manuscript. Candidate of Technical Sciences P. P. Parkhomenko said that Soviet scientists want to create universal installations to watch simultaneously for many types of articles being produced, such as the automatic machine PUMA. Candidate of Technical Sciences I. V. Prangishvili spoke of the possibility of designing small computers and control machines. Doctors of Technical Sciences A. Ya. Lerner and A. G. Butkovskiy spoke about the new branch of systems engineering. Candidate of Technical Sciences N. V. Pozin spoke on bionics.

[NC]

SUB CODE: C9/ SUBM DATE: none/ ATD PRESS: 5115

06/

Card 2/2

ACC NR: AN7004819

SOURCE CODE: UR/9022/67/000/032/0003/0003

AUTHOR: Berezhnoy, Yu.

ORG: none

TITLE: Studies in automation

SOURCE: Sovetskaya Rossiya, no. 32, 07 Feb 67, p. 3, col. 1-3

TOPIC TAGS: automation, cybernetics, *medicine*

ABSTRACT This is a round table discussion of scientists from the Institute of Automation and Telemechanics, which has three academicians, 40 doctors, 140 candidates of sciences, and 200 aspirants. The discussion started with the Institute's director Academician V. A. Trapeznikov, who said that what is needed are machines that could orient themselves in situations where man is helpless. Then Candidate of Technical Sciences V. N. Vapnik and Chief Engineer A. Ya. Chervonekes spoke on cybernetic medicine and in particular on the diagnosis of infarcts by the electrocardiogram. Candidate of Technical Sciences V. A. Zozhikashvili said that in the USSR several systems of mass service will be created. One of them will allow a passenger to buy tickets for any trip, direct or with changes, oneway or round trip, in a few seconds. The system is to begin functioning in Moscow.

Card 1/2

UDC: none

BEREZHNOCY, Yu.

Visiting the inventor of the miniature hydroelectric power-
plant. IUn.tekh. 4 no.2:60-64 F '60. (MIRA 13:6)
(Electric generators)

BEREZHNOY, Yu.

Ultrasonic waves intermix molecules. Izobr. i rats. no.8:12 Ag '59.
(MIRA 13:1)

(Ultrasonic waves---Industrial applications)
(Welding)

БЕРЕЗНОВ, Ю.

Welding without welding heat. IUn. tekhn. 4 no.10:31-32 0 '59.
(MIRA 13:1)

(Cold welding)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204800019-6

BEREZHNOY, Yu.

Titanium. IUn. tekhn. 4 no.9:32 S '59.
(Titanium)

(MIRA 12:12)

BEREZHNOY, Yu.; ZORIN, Yu.

Welding with electron beams. IUn. tekhn. 3 no. 6:24-26 Je '59.
(MIRA 12:8)

(Electronic apparatus and appliances)
(Welding)

BEREZHNOY, Yu.

Ultrasonic welding. IUn.tekh. 3 no.4:47-48 Ap '59.

(MIRA 12:4)

(Welding)

(Ultrasonic waves--Industrial applications)

ACC NR: AT7007642

current must be at least 350 ma. A block diagram of the memory and associated units is given and their functions described. Debugging and routine memory checkout schedules are given. Orig. art. has: 5 figures.

[WA-81]
[BD]

SUB CODE: 09/ SUBM DATE: none/ ORIG REF: 001/ OTH REF: 001

Card 2/2

ACC NR: AT7007642 (N) SOURCE CODE: UR/0000/66/000/000/0100/0106

AUTHOR: Berezhnoy, Ye. F.; Kobelev, V. V.; Nenarokov, A. F.; Shashko, V. D.

ORG: none

TITLE: Thin film matrix memory with conductive substrate

SOURCE: Vsesoyuznoye soveshchaniye po magnitnym elementam avtomatiki i vychislitel'noy tekhniki. 10th, Kaunas, 1964. Magnitnyye elementy vychislitel'noy tekhniki (Magnetic elements in computer engineering); trudy soveshchaniya, pt. 2. Moscow, Izd-vo Nauka, 1966, 100-106

TOPIC TAGS: computer memory, thin film memory, *magnetic film storage, computer output unit*

ABSTRACT: A model of a new high-speed, destructive-readout film memory with a 500-nsec cycle time is described. The memory is based on four matrix blocks which have a total capacity of sixty-four 56-bit words. An individual storage element is a vacuum-deposited 1.2 x 2.4 mm magnetic film approximately 1000 Å thick, on a highly-polished duralumin substrate. Each substrate block measures 100 x 100 x 4 mm. Read windings are mounted in the easy direction, write and signal windings in the hard direction. Write current does not exceed 120 ma; erase

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ILLEGIBLE

BERIEZHNOY, Ye.F.

[Device for determining the frequency characteristics of cores with magnetic polarity reversal along the symmetric hysteresis cycles approaching a hysteresis loop limit] Pri- bor dlia opredeleniia chastotnykh svoistv serdechnikov pri peremagnichivanii po simmetrichnym tsiklam gisterezisa, blizkim k predel'nym. Moskva, ITM i VT AN SSSR, 1962. 15 p. (MIRA 15:8)

(Cores (Electricity)) (Electronic calculating machines)